

REMARKS

Claims 1-30 are currently pending. Claims 1-2, 6, 8, 10-11, 14-15, 18, 22 and 29-30 have been amended. Claims have been amended to specify that the shearing device is a blade. FIG. 6 of Applicant's specification shows that a blade is not a screed. Claim 9 has been cancelled.

I. §§ 102 and 103 Rejections

Applicant submits that claims 1-8 and 10-30 have novelty and are non-obvious over the cited references. First, Applicant would like to point out the differences between the primary cited references and Applicant's claimed invention.

Applicant respectfully submits that claims 1-7, 11-15, 20, 22-24, 26 and 27 are not anticipated or made obvious by U.S. Patent No. 5,258,961 to Sehr et al. (Sehr). Sehr does not disclose or suggest a drag box having a framework that is adapted to be pulled behind a prime mover and that is coupled with the prime mover using a non-rigid connecting structure so as to accommodate movement independent of the prime mover, as claimed by Applicant in independent claims 1 and 22. In contrast, Sehr discloses a screed that is connected to a prime mover using rigid tie arms that keep Sehr's screed suspended. The inclination of the angle of Sehr's screed is controlled through actuating cylinders on the prime mover that engage the front ends of the tie arms. Sehr does not disclose or suggest a drag box that includes a blade mounted on the framework wherein the blade is movable in a vertical plane independent of the prime mover, as also claimed by Applicant in claim 1 and 22. Still further, Sehr does not disclose or suggest a proximity control device mounted on the framework of a drag box, as claimed by

Applicant in claims 1 and 22, rather than on the prime mover, as taught by Sehr. For the foregoing reasons, Sehr does not disclose or suggest Applicant's invention claimed in claims 1 and 22. In addition, claims 2-8, 10-21, and 23-30 depend from either claim 1 or claim 22 and are not disclosed or suggested by Sehr for the same reasons that claims 1 and 22 are not disclosed or suggested.

Applicant respectfully submits that U.S. Patent No. 6,554,080 to Horner (Horner) does not disclose or suggest a drag box having a framework adapted to be pulled behind a prime mover, as claimed by Applicant in independent claims 1 and 22. In addition, Horner does not disclose or suggest a drag box that is pulled behind a prime mover using a non-rigid connecting structure, as claimed by Applicant in claims 1 and 22. Further, Horner does not disclose or suggest a blade mounted on the framework of a drag box, as claimed by Applicant in claims 1 and 22. Instead, Horner discloses a screed 38 that is attached to a mold board 28 in the middle of the prime mover apparatus with wheels 16 and 18 following behind screed 38. Still further, Horner does not disclose or suggest a device for distributing an asphalt mixture over the surface that is coupled with the framework of the drag box, as claimed by Applicant in claims 1 and 22. In Horner, the distribution hopper 36 is located in front of wheels 14 whereas screed 38 is located behind wheels 14. Still further, Horner does not disclose or suggest at least one signal generator and at least one signal receiver associated with a proximity control device for activating the proximity control device and raising and lowering a blade in response to a signal from the signal generator, as claimed by Applicant in claims 1 and 22.

U.S. Patent No. 6,079,901 to Banks (Banks) does not disclose or suggest a drag box having framework that is adapted to be pulled behind a prime mover and a non-rigid connecting structure for coupling the framework with the prime mover to accommodate floating vertical movement independent of the prime mover, as claimed by Applicant in claims 1 and 22. Further, Banks does not disclose or suggest apparatus having a blade that is moveable in a vertical plane independent of the prime mover, as also claimed by Applicant. Still further, Banks does not disclose or suggest a proximity control device mounted on the framework of the drag box for raising and lowering the blade in response to elevational changes in the surface, as also claimed by Applicant. In addition, Banks does not disclose or suggest at least one signal generator and at least one signal receiver associated with the proximity control device for activating the proximity control device so as to raise and lower the blade in response to a signal from the signal generator, as also claimed by Applicant.

As to the specific § 103 rejections, Applicant submits that a prima facie case of obviousness for rejecting the pending claims, as currently amended, has not been established. Applicant submits that claims 1-7, 11-15, 20, 22-24, 26, and 27 are not obvious over Horner in view of U.S. Patent No. 4,924,374 to Middleton et al. (Middleton). As admitted in the Office Action, Horner does not disclose the use of a distance measuring device that is able to raise and lower a blade in response to changes in the surface, as claimed by Applicant in independent claims 1 and 22. Further, as discussed in more detail above, Horner does not disclose or suggest numerous other features of Applicant's claimed drag box.

Even if Middleton is combined with Horner, Applicant's claimed invention is not disclosed or suggested. The combination of Horner and Middleton does not disclose or suggest a drag box having a framework that is adapted to be pulled behind a prime mover using a non-rigid connecting structure, as claimed by Applicant in claims 1 and 22. Instead, both the screed of Banks and the blade of Middleton are secured in the middle of the prime mover with wheels and axle of the prime mover passing an area after the screed or blade has passed. Accordingly, neither Horner nor Middleton nor the combination thereof discloses a drag box having a framework that is coupled in such a way as to accommodate floating vertical movement independent of the prime mover, as claimed by Applicant in claims 1 and 22. Still further, the combination of Horner and Middleton does not disclose or suggest a distribution device coupled with the framework of the drag box for distributing an asphalt mixture over a surface before a blade on the framework travels over the surface, as also claimed by Applicant in claims 1 and 22. Still further, the combination of Horner and Middleton does not disclose or suggest a proximity control device that is mounted on a framework of the drag box that is pulled behind the prime mover, as also claimed by Applicant in claims 1 and 22. Claims 2-8, 10-21, and 23-30 depend from either claim 1 or claim 22 and are not disclosed or suggested by these references for the same reasons discussed above. For the foregoing reasons, a prime facie case of obviousness for rejecting claims 1-7, 11-15, 20, 22-24, 26, and 27 has not been established, and these claims should be allowed in view of Horner and Middleton.

Applicant respectfully submits that claims 1-8, 15, 18, 20, and 21 are not obvious over Banks in view of U.S. Patent No. 5,201,604 to Ferguson et al. (Ferguson). As admitted in the Office Action, Banks does not disclose the use of a distance measuring device that is able to raise and lower a blade in response to changes in the surface to be paved. Further, as discussed in more detail above, Banks does not disclose or suggest numerous other features of Applicant's claimed drag box.

Even if Banks is combined with Ferguson, the combination does not disclose or suggest Applicant's claimed invention. The combination of Banks and Ferguson does not disclose or suggest a framework of a drag box adapted to be pulled behind a prime mover and a non-rigid connecting structure for coupling the framework with the prime mover so as to accommodate floating vertical movement independent of the prime mover, as claimed by Applicant in independent claims 1 and 22. Still further, the combination of Banks and Ferguson does not disclose or suggest a blade mounted on the framework of the drag box that is movable in a vertical plane independent of the prime mover, as also claimed by Applicant in claims 1 and 22. In contrast, both Banks and Ferguson disclose adjusting their screeds in an arcuate direction through a tow point connected with the prime mover. The combination of Banks and Ferguson does not disclose or suggest a proximity control device mounted on the framework of a drag box for raising and lowering the blade in response to elevational changes in the surface, as claimed by Applicant in claims 1 and 22. Claims 2-8, 10-21, and 23-30 depend from either claim 1 or claim 22 and are not disclosed or suggested by these references for the same reasons discussed above.

For the foregoing reasons, a prime facie case of obviousness for rejecting claims 1-8, 15, 18, 20, and 21 has not been established, and these claims should be allowed in view of Banks and Ferguson.

Applicant respectfully submits that claims 16 and 17 are not obvious over Banks in view of Ferguson and U.S. Patent No. 6,033,147 to Richter (Richter). Even if Richter is combined with Banks and Ferguson, claims 16 and 17 are not made obvious. Neither Banks nor Ferguson nor Richter discloses or suggests that Applicant's claimed apparatus can be used to form asphalt layers between $\frac{3}{8}$ of an inch and 4 inches, as claimed by Applicant in claim 16, or asphalt layers between 1 and 4 inches, as claimed by Applicant in claim 17. While Richter discloses that asphalt layers can vary between 2 cm and 8 cm (0.8 to 3.2 inches), this in no way discloses or suggests that Applicant's claimed drag box, which is pulled behind a prime mover, is able to distribute and shear asphalt mixtures having these claimed thicknesses. Accordingly, there is no motivation to combine Richter with Banks and Ferguson. In fact, Richter does not suggest what machinery should be used to create his asphalt layers having a thickness of between $\frac{3}{8}$ of an inch and 4 inches. In the absence of any machinery being disclosed by Richter, it should be assumed that conventional machinery is being used by Richter and that Richter is not suggesting the use of a drag box that is dragged behind a prime mover using a non-rigid connecting structure. For the foregoing reasons, claims 16 and 17 are not obvious over Banks in view of Ferguson and Richter.

Applicant respectfully submits that claim 10 is not obvious over Sehr in view of U.S. Patent No. 6,227,761 to Kieranen et al (Kieranen). Even if Kieranen is combined with Sehr, a drag box having framework that is adapted to be pulled behind a prime mover and a non-rigid connecting structure for coupling the framework with the prime mover, as claimed by Applicant in claim 10, is not disclosed or suggested. Accordingly, the combination of Sehr and Kieranen does not disclose or suggest a framework of a drag box that is able to accommodate floating vertical movement independent of the prime mover, as claimed by Applicant in claim 10. Still further, the combination of Sehr and Kieranen does not disclose or suggest a proximity control device mounted on the framework of the drag box so that it is dragged behind the prime mover, as claimed by Applicant in claim 10. For the foregoing reasons, claim 10 is patentable over the combination of Sehr and Kieranen.

Applicant respectfully submits that claim 19 is not obvious over Sehr in view of U.S. Patent No. 6,036,353 to Paetzold (Paetzold). Even if Paetzold is combined with Sehr, a framework that is adapted to be coupled with a prime mover using a non-rigid connecting structure so as to accommodate floating vertical movement independent of the prime mover is not disclosed or suggested. Further, the combination of Sehr and Paetzold does not disclose or suggest a drag box having a blade that is movable in a vertical plane independent of the prime mover, as also claimed by Applicant. Still further, there is no motivation to combine Sehr and Paetzold, as Sehr discloses a road finishing machine whereas Paetzold discloses a portable mixing plant. There is no motivation from the cited references that the features of a portable

mixing plant could be incorporated into a road finishing machine. It appears that by combining Paetzold's portable mixing plant, which is 50 feet long, with Sehr's road finishing machine, a vehicle would be created that would be too large and unmanageable to be able to be used in a paving process. For the foregoing reasons, claim 19 is not obvious over Sehr in view of Paetzold.

II. Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that claims 1-8 and 10-30 are now in condition for allowance and eventual issuance. Such action is respectfully requested. Should the Examiner have any further questions or comments which need be addressed in order to obtain allowance, please contact the undersigned attorney at the number listed below. Acknowledgment of receipt is respectfully requested.

Respectfully submitted,



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